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EXAMINER
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OSMAN, RAMY M

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TED CHONGPI LEE and CHAIN N. YUNG

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Appeal 2008-0366  
Application 09/672,204  
Technology Center 2100

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Decided: May 7, 2008

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Before JOSEPH L. DIXON, CAROLYN D. THOMAS, and  
STEPHEN C. SIU, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-23. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

#### A. INVENTION

1 The invention at issue involves load balancing between nodes of a Synchronous Optical Network (SONET) (Spec. 1). In particular, links connecting nodes in a SONET ring have an associated plurality of facilities, each facility having a respective bandwidth utilization level. A circuit path is determined based on which facilities are determined to have bandwidth utilization levels exceeding a threshold level (*id.* 2).

#### B. ILLUSTRATIVE CLAIM

Claim 1, which further illustrates the invention, follows:

1. A method, comprising the steps of:

determining a first circuit path between a source node and a destination node in a Synchronous Optical Network (SONET) ring comprising a plurality of nodes interconnected by links, each of said links having associated with it a plurality of facilities, each of said facilities having associated with it a respective bandwidth utilization level, wherein said facilities having bandwidth utilization levels exceeding a first threshold level are not used to define said first circuit path.

#### C. REJECTIONS

Claims 1-3, 7-10, and 12-23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by G.D. Morley & W.D. Grover, *Optimal Loading of SONET BLSRs: Assessment of Benefits of Demand Splitting and Time-Slot Interchange*, Canadian Conference on Broadband Research, June 22-24,

1998 (“Morley”).<sup>1</sup> Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Morley and Wan, P. J. & Yang, Y., *Load Balancing in Counter-Rotated SONET Rings*, Proceedings of the International Conference on Parallel Processing, 1999 (“Wan”). Claims 6 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Morley and U.S. Patent No. 6,014,567 (“Budka”).

## II. ANALYSIS

The Examiner finds that Morley discloses links between nodes (i.e., each span) “can be a four fiber BLSR span” and equates each of the fibers with a “facility” as claimed in claims 1, 7, 12, 17, and 21 because “any span that has a total load (*bandwidth*) above a line capacity *c* (i.e., *threshold level*) is not used to define the transmission path” (Ans. 11-12). Appellants argue that the fibers of Morley are not equivalent to the facilities of claims 1, 7, 12, 17, and 21 because “the threshold of the span, not the individual fibers of Morley, is utilized” (Reply Br. 2) and “Morley is silent on any capacity or threshold (i.e. bandwidth utilization level) for each individual fiber (i.e., facility)” (Reply Br. 3).

“[A]nticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. . . .” *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) (citing *Lindemann Maschinenfabrik GMBH v.*

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<sup>1</sup> Claim 3 depends from claim 1 and recites “said second path,” which lacks antecedent basis. Therefore, we consider claim 3 to depend from claim 2 (which recites “a second circuit path”) to decide the appeal of claim 3.

*American Hoist & Derrick Co.*, 730 F.2d 1452, 1457 (Fed. Cir. 1984)).  
"[A]bsence from the reference of any claimed element negates anticipation."  
*Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed. Cir.  
1986).

Morley discloses that "the sum of demands routed over each span . . . does not exceed its line capacity" (p. 3). The Examiner finds that the span of Morley "has a total . . . line capacity c" and that a span "can be a four fiber BLSR span," but the Examiner does not demonstrate that Morley also discloses that each fiber within the span of Morley has an associated "respective bandwidth utilization level" and that respective fibers "having bandwidth utilization levels exceeding a first threshold level are not used to define said first circuit path" as recited in claims 1 and 17. Rather, a span (not a respective fiber) in Morley is not used if demands routed over the span exceeds the corresponding line capacity.

Similarly, claim 7 recites "determining whether a respective bandwidth utilization level for each selected facility within said circuit path is below a first threshold level" and claim 12 recites "determining the bandwidth utilization level for each selected facility within each of said at least one link" and "rejecting said selected facility in the case of said respective bandwidth utilization level being above a threshold level." As described above, the Examiner finds that Morley discloses a line capacity "c" for a span and equates the "line capacity" of Morley with the claimed "bandwidth utilization level." However, the Examiner does not show that

Morley also discloses determining a line capacity (or bandwidth utilization level) for each respective fiber within the span, determining whether the line capacity of each respective fiber (not the span) is below a threshold level, or rejecting a fiber if a respective line capacity of the fiber (not the span) is above a threshold level as claimed.

Claim 21 recites “determining whether one of said plurality of facilities for each of said links . . . has associated with it a bandwidth utilization level exceeding a threshold level.” As set forth above, the Examiner finds that Morley discloses that a “span” contains four fibers and equates the fibers of Morley with the claimed “facilities.” However, the Examiner does not show that Morley also discloses determining whether one of the fibers of the span (i.e., one of the facilities for each link) has an associated bandwidth utilization level exceeding a threshold level. Rather, Morley discloses a line capacity for the span (not a fiber).

Claims 4 and 5 depend from claim 1. The Examiner finds that “Wan discloses short-way routing” (Ans. 8) but does not show that Wan discloses the features of claim 1 which we found lacking in the teachings of Morley above. Similarly, claim 6 depends from claim 1 and claim 11 depends from claim 7. The Examiner finds that “Budka teaches detection and notification of load imbalances in a communication network (see Abstract)” (Ans. 10) but does not demonstrate that Budka discloses features of claim 1 and claim 7 which we found lacking in the teachings of Morley above.

We therefore reverse the rejections of independent claims 1, 7, 12, 17, and 21, and of claims 2-6, 8-11, 13-16, 18-20, 22, and 23, which depend therefrom since the Examiner has not set forth a proper initial showing of all of the claim limitations for anticipation and obviousness.

### III. ORDER

In summary, the rejection of claims 1-3, 7-10, and 12-23 under § 102(b) and the rejection of claims 4-6 and 11 under § 103(a) are reversed.

No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED

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